

Orbiting Carbon Observatory-3 (OCO-3)

Mission Overview

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Project Manager*



National Aeronautics and Space Administration
Jet Propulsion Laboratory
California Institute of Technology

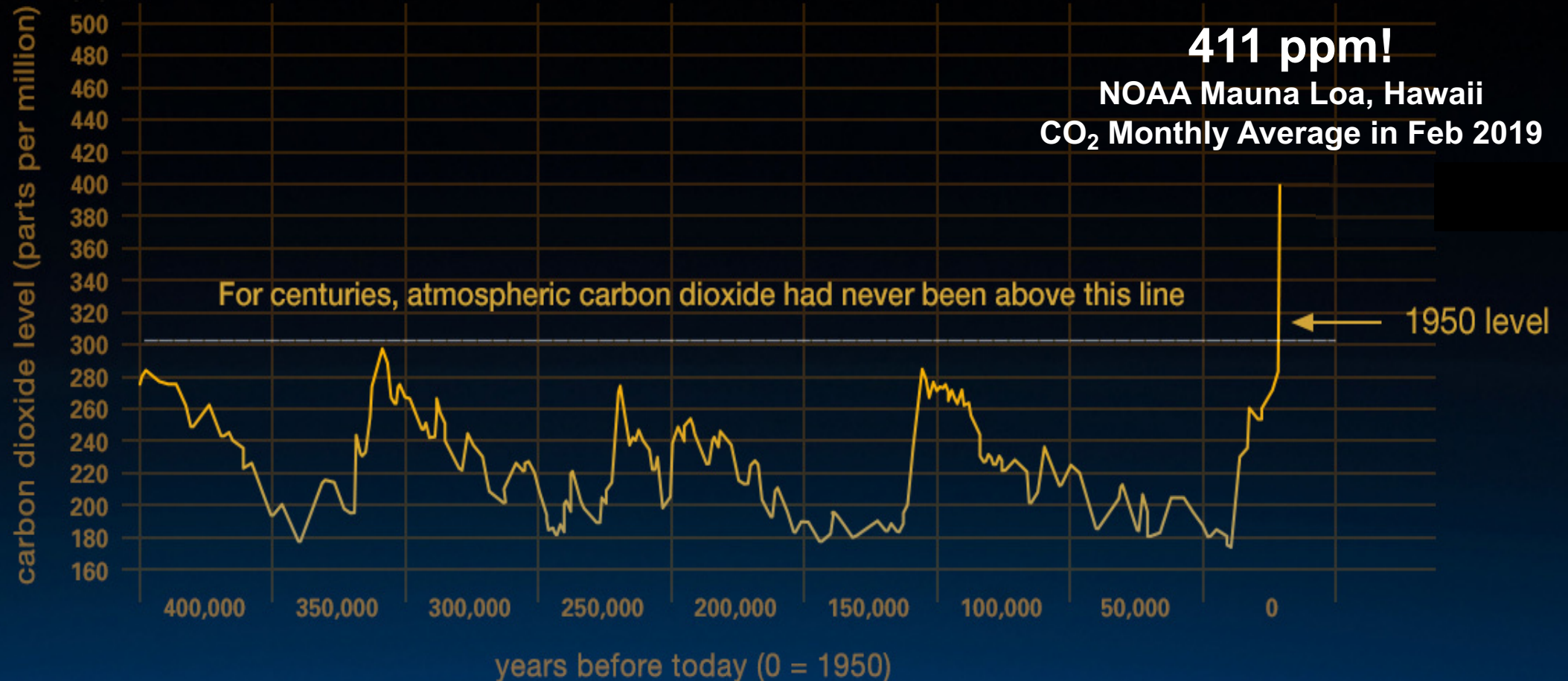
[Image credit: NASA]

OCO-3 Launch

6:21 am EDT

Tomorrow morning, Thursday, 25 April 2019

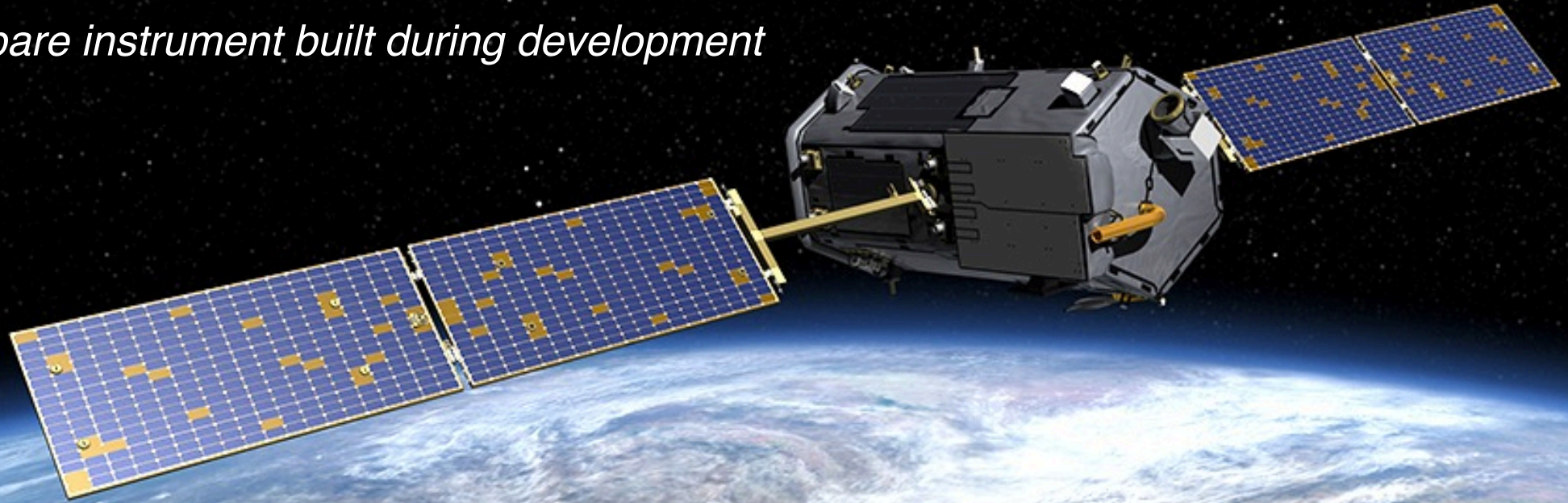
The Long-Term Atmospheric Carbon Dioxide Data Record



[Credit: Vostok ice core data/J.R. Petit et al.; NOAA Mauna Loa, Hawaii CO₂ record.]

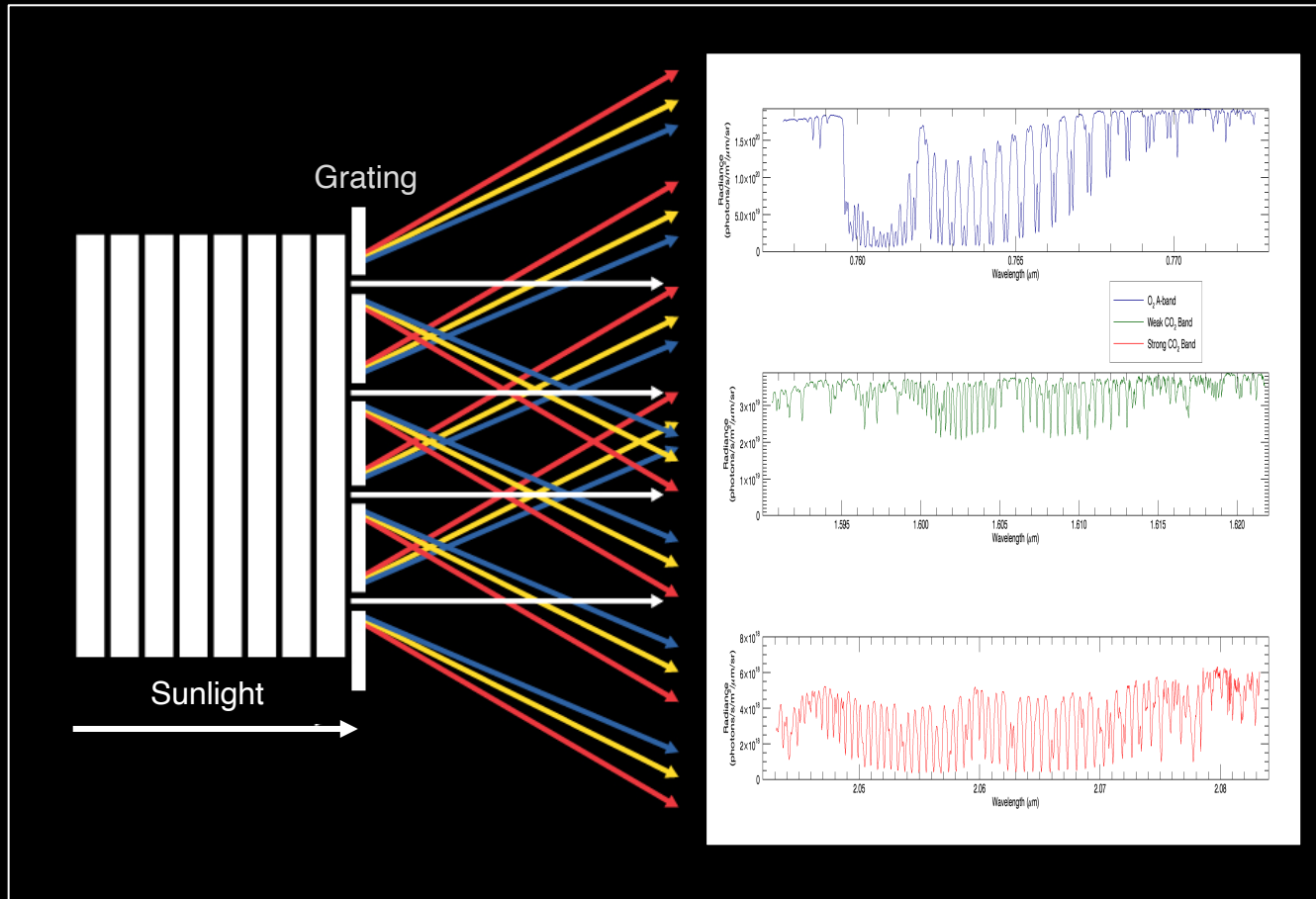
OCO-2 Free Flying Satellite

- *Operating for nearly 5 years*
- *Provides for global sampling of CO₂*
- *Spare instrument built during development*



Three-Channel Grating Spectrometer

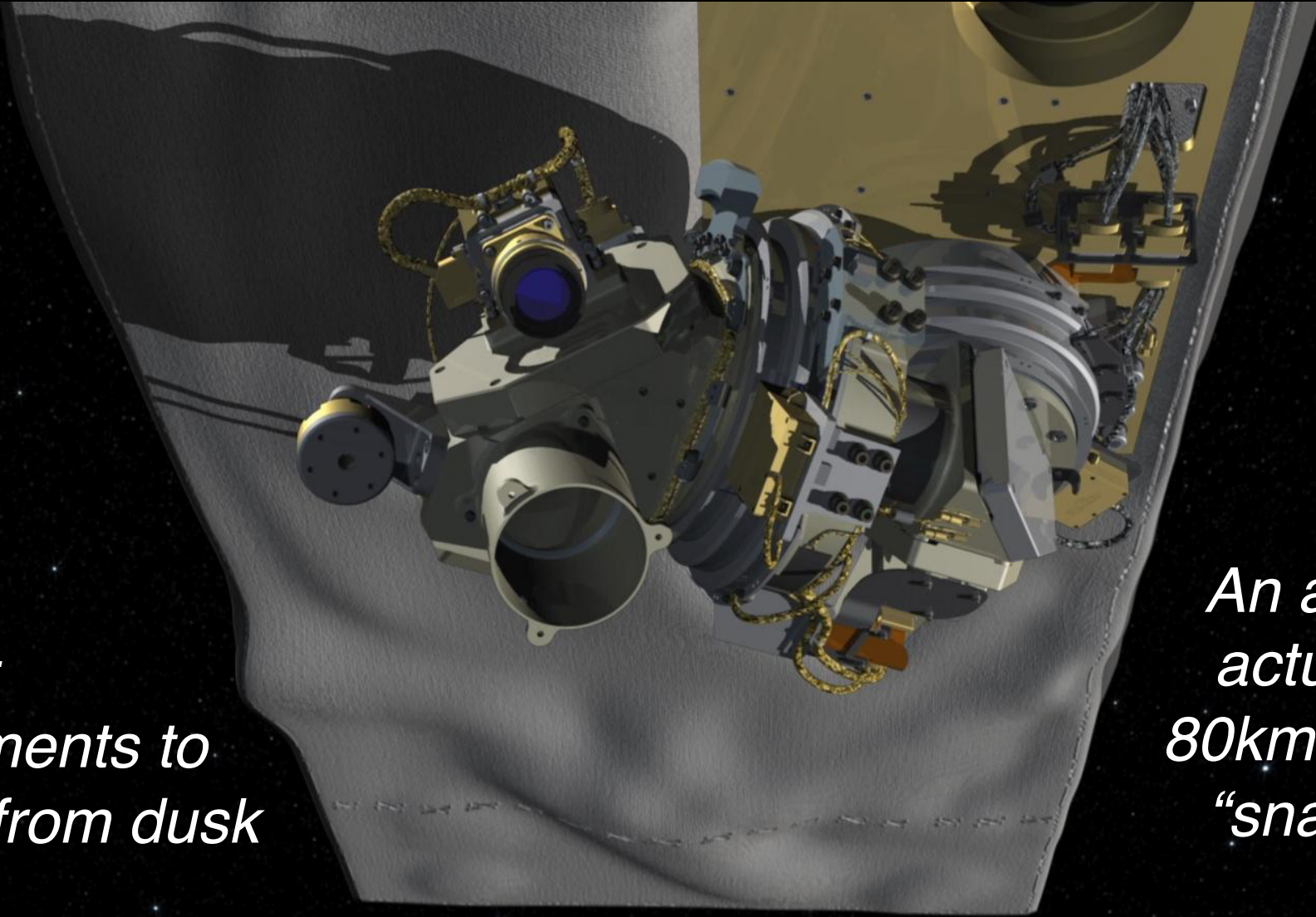
→ Think Prism



Atmospheric carbon dioxide levels are determined by examining the absorption lines in the solar spectra

Bonus data product – Solar-Induced Chlorophyll Fluorescence (SIF)

OCO-3 Operating on the International Space Station (ISS)



*Allows for
measurements to
be made from dusk
to dawn*

*An agile two-axis
actuator enables
80km x 80km area
“snapshot” mode
operations*

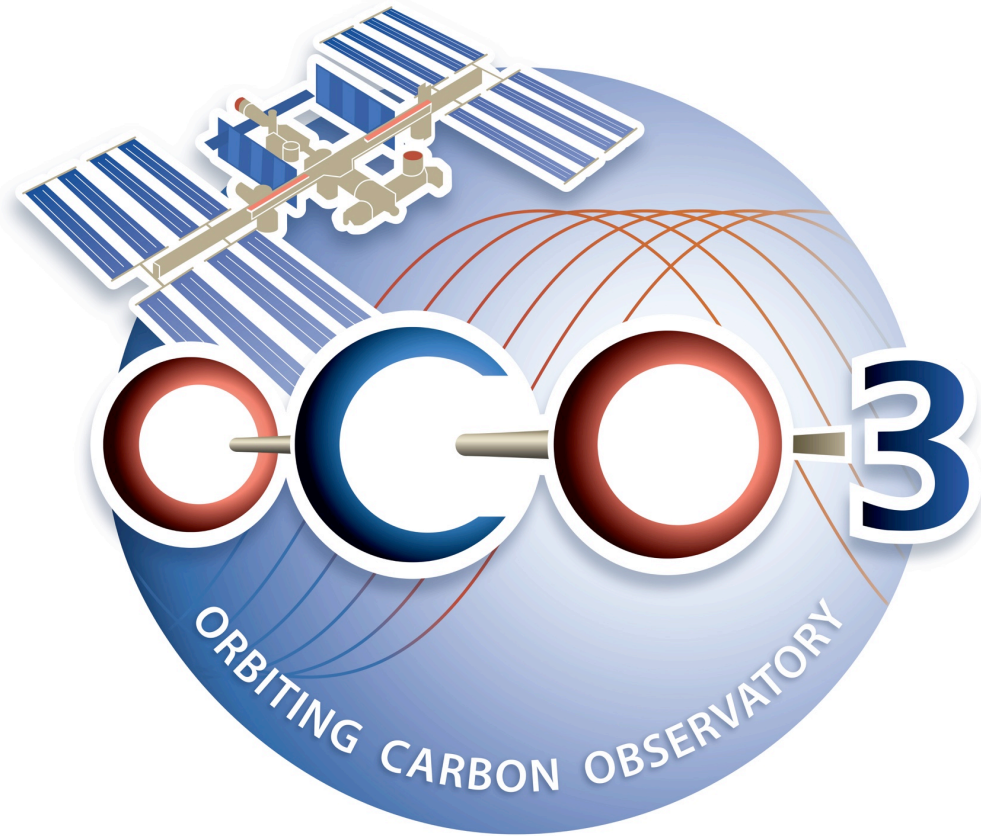
Mission Timeline

- ▲ *Launch: 6:21 am EDT, Thursday, 25 April 2019*
- ▲ *Installation on the ISS: less than 2 weeks later*
- *90-day In-Orbit Checkout (IOC) period*
- *3-year nominal mission*

***Carbon footprint -
Please join me and the others on the
OCO-3 team as we take the next
step in this important journey***



[Image credit: NASA/JPL]



For more information please go to:
<http://ocov3.jpl.nasa.gov>